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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,442

05/05/2006

Kiyoshi Sagawa

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2801

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01/14/2011

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EXAMINER

DIETERLE, JENNIFER M

ART UNIT

PAPER NUMBER

1759

MAIL DATE

DELIVERY MODE

01/14/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,442	SAGAWA ET AL.	
	Examiner	Art Unit	
	Jennifer Dieterle	1759	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-12 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/3/10, 9/28/10</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

Claims 1-12 are pending.

Claims 1-3 have been withdrawn.

Claims 7-12 have been added by amendment.

Claims 4-10 have been amended to recite a new device not previously claimed and are withdrawn based on original presentation.

Claims 11-12 have been added and recite the original device and are being examined.

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 4-6 in the reply filed on March 12, 2010 is acknowledged. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

2. Newly amended claims 4-10 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 4 recites a device that includes an impedance element that "improves the *linearity* of the sense voltage." Newly added claim 11 recites the original device in which the impedance element functions to "improve the *non-linearity* of the sense voltage." As claims 4-10 are directed to a device that includes an impedance element that functions to "improve *linearity*" and given that claims 11-12 are directed to a device that includes an

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impedance element that functions to "improve *non-linearity*", these are two different devices as a device comprising an impedance element that improves linearity would not function to not improve non-linearity and vice versa. Moreover, galvanic cells, which would appear to be applicant's invention, obey Nernst's Law in delivering a voltage which is proportional to the logarithm of the concentration of ions to be measured in the electrolyte which would lead to an improvement of non-linearity (see Petersen et al. US 4,227,974, col. 3, lines 5-20).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 4-10 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Allowable Subject Matter

3. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).
4. Claims 11 and 12 are allowable.
5. Claim 11 recites a water quality analyzer comprising a pair of different metal electrodes, a detection means, an impedance element connected between the sensor electrode having an impedance value that can improve non-linearity of the sense voltage, an offset voltage supply means, an amplification means, and a setting means

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that provides a calibration mode of the sense voltage and sets the offset voltage and the gain so that with the sensor electrode soaked in a liquid of reference concentration, the sense voltage generated across the electrodes agrees with a reference voltage.

The prior art of record, Pierangela et al. (US 6,054,030) teach a water quality analyzer having two different metal electrodes with a resistor connected between the electrodes, but does not teach that the resistor is capable of improving non-linearity of a sense voltage across a pair of electrodes. Nor does Pierangela teach the use of an offset voltage supply means, an amplification means, or a setting means.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Dieterle whose telephone number is (571) 270-7872. The examiner can normally be reached on Monday thru Thursday, 9am to 4pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMD
1/3/11

/Alexa D. Neckel/
Supervisory Patent Examiner, Art Unit 1723